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|-----------------|-------------|----------------------|---------------------|------------------|
| 09/039,438      | 03/16/1998  | WOO-SUP SHIN         | 041992-5037         | 9576             |

30827 7590 11/30/2007  
MCKENNA LONG & ALDRIDGE LLP  
1900 K STREET, NW  
WASHINGTON, DC 20006

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| EXAMINER |
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ZERVIGON, RUDY

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| ART UNIT | PAPER NUMBER |
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1792

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11/30/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

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| APPLICATION NO./<br>CONTROL NO. | FILING DATE | FIRST NAMED INVENTOR /<br>PATENT IN REEXAMINATION | ATTORNEY DOCKET NO. |
|---------------------------------|-------------|---|---------------------|
| 09039438                        | 3/16/98     | SHIN ET AL.                                       | 041992-5037         |

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**EXAMINER**

Rudy Zervigon

| ART UNIT | PAPER    |
|----------|----------|
| 1792     | 20071129 |

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

Commissioner for Patents

Rudy Zervigon  
Primary Examiner  
Art Unit: 1792

### **DETAILED ACTION**

1. A technical error in the Examiner's November 1, 2007 Examiner's Answer is corrected. At page 6 of the Examiner's Answer the misprinted patent number for Kanda is corrected. See replacement sheet.

### ***Conclusion***

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Rudy Zervigon whose telephone number is (571) 272-1442. The examiner can normally be reached on a Monday through Thursday schedule from 8am through 7pm. The official fax phone number for the 1792 art unit is (571) 273-8300. Any Inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Chemical and Materials Engineering art unit receptionist at (571) 272-1700. If the examiner can not be reached please contact the examiner's supervisor, Parviz Hassanzadeh, at (571) 272-1435.

*Rudy Zervigon*  
11/29/7

Art Unit: 1792

At the time of the invention it would have been obvious to a person of ordinary skill in the art to add Allies's mass/material separation filtration tank to Schutt's processing system.

The motivation to add Allies's mass/material separation filtration tank to Schutt's processing system is to further purifying the recycled spent etchant solution as taught by Allies (column 5, line 64 - column 6, line 5).

Therefore, it would have been obvious to a person of ordinary skill in the art to combine Schutt with Chung et al and Kanda to obtain the invention.

Claims 3-6, 8, 9, 12, 15, 23, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schutt (US 3,532,568 A) in view of Chung et al (U.S.Pat.5,00,795), Kanda (U.S. Pat. No. ~~4,886,590~~ 4338157 A), and Allies, Victoria R. et al (U.S.Pat. 5,560,838), and further in view of Jones et al (U.S. Pat. No. 3,869,313).

Schutt, Chung, Kanda, and Allies are discussed above.

Schutt, Chung, Kanda, and Allies do not disclose expressly a rinse and drying bath for the substrate.

As to claims 3-5, 8, 9, and 12, Jones et al disclose a chemical processing apparatus containing a plurality of treatment chambers having a dip chamber with filling pumps, a spray chamber which serves as a rinse chamber or a drying chamber (col. 2, lines 20-39 and 63-68; col. 3, lines 1-10). The rinse chamber would be filled with deionized water from a deionized reservoir (col. 2, lines 52-55). An essential part of the apparatus is a conveyor means for automatically transferring the workpieces from treatment chamber to treatment chamber. (Fig. 1; Col. 3, lines 50-55). The conveyor allows for a plurality of substrates to be processed substantially at the same time. Using a pump to move fluid from one chamber to another is conventional. Jones further teaches a